



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
-----------------	-------------	----------------------	---------------------	------------------

10/521,699

01/19/2005

Zhengwei Wang

57451.8001.US00

2161

34055

7590

02/12/2009

PERKINS COIE LLP

POST OFFICE BOX 1208

SEATTLE, WA 98111-1208

EXAMINER

D AGOSTA, STEPHEN M

ART UNIT

PAPER NUMBER

2617

MAIL DATE

DELIVERY MODE

02/12/2009

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/521,699	Applicant(s) WANG, ZHENGWEI	
	Examiner Stephen M. D'Agosta	Art Unit 2617	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 17 December 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-4 and 6-27 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-4, 6, 11, 14, 16, 18, 20, 23, 25 and 26 is/are rejected.
- 7) ☒ Claim(s) 7-10, 12, 13, 15, 17, 19, 21, 24 and 27 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Amendment

1. A new examiner has been assigned to this case – Stephen D'Agosta
2. A new Non-Final office action is attached.
3. There appears to be a USC 101 issue with claim 1 since this "method claim" does not empirically state WHAT device is performing the method steps (eg. markers are sending data and the mobile is performing operational control steps).
4. The USC 112 rejection is overcome by the amendment and the examiner agrees that support for the MPU device is a) well known and b) found in the specification (Para #21). Thank you.
5. The claims appear to be directed to a mobile device/phone that determines its location/position and then controls the phone accordingly (eg. turn on Vibrate if entering a meeting/theater/restaurant, turn on Ringer if at Home/Outside/Stadium, etc). The examiner puts forth new prior art which teaches these concepts.

Claim Rejections - 35 USC § 101

35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claim(s) 1 is/are rejected under 35 U.S.C. 101 as not falling within one of the four statutory categories of invention. While the claims recite a series of steps or acts to be performed, a statutory "process" under 35 U.S.C 101 must (1) be tied to another statutory category (such as a particular apparatus), or transform(s) underlying subject matter (such as an article or material) to a different state or thing. The instant claims neither transform underlying subject matter nor positively tie to another statutory category that accomplishes the claimed method steps, and therefore do not qualify as a statutory process.

Perhaps a more optimal phrasing would be:

"1. (Previously presented) A method for performing services by ~~of~~ a mobile phone, the method comprising....."

This would positively identify the mobile as the statutory apparatus that is performing the method steps.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

The term "short distance" in claims 1 and 25 is a relative term which renders the claim indefinite. The term "short distance" is not defined by the claim and the specification does not provide a standard for ascertaining the requisite degree, and one of ordinary skill in the art would not be reasonably apprised of the scope of the invention.

This term can be interpreted as a message from a Bluetooth/WLAN transceiver, which typically transmits in much shorter ranges than compared to a cellular Base station (BTS).

Similarly, the term short distance could be compared between a Base Station and Satellite whereas the BTS will transmit a comparatively shorter distance.

The "markers" discussed could be a Base Station or separate, low-powered Bluetooth transmitters, etc..

For the purposes of examination, the examiner will interpret that either/any can be used as a "marker" (eg. BTS, Bluetooth, WLAN, etc.)

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-4, 6, 11, 14, 16, 18, 20, 22-23 and 25-26 rejected under 35

U.S.C. 103(a) as being unpatentable over Kuwahara and further in view of Jonsson and Naiki.

As per **claims 1 and 25**, Kuwahara teaches a method for performing services of a mobile phone, the method comprising:

setting at least one marker module for physical objects desired to be marked, wherein marking information of the marker module itself is stored in said marker module, said marker module can transmit said marking information via a short-distance wireless message (Abstract teaches the Base Station transmitting its location to a wireless device);

setting a wireless identifier module in the mobile phone, wherein said identifier module can receive the short-distance wireless message transmitted by the marker module (figure 1 shows a wireless device that can receive location information from the BTS, #1);

storing preset entry trigger records in the mobile phone, wherein said entry trigger records comprise a corresponding relationship between a predefined marking information and a predefined entry trigger service (figure 1 shows the wireless device whereby the user can define locations and behavior control of phone, #5. Also see figures 6, 12 and 13 for zones/areas defined and behavior control mapping);

retrieving corresponding marking information from the short-distance wireless message received from any one marker module by said identifier module (figures 6, 12

Art Unit: 2617

and 13 show the mapping of the Location vs. Behavior, eg. figure 13 shows HOME, OFFICE, MEETING ROOM, LIBRARY and how the phone will act/behave); and

when the mobile phone determines based on the retrieved marking information that the mobile phone enters an area marked by said marker module and an entry trigger service corresponding to the retrieved marking information is contained in said entry trigger records, performing the corresponding entry trigger service (figures 6, 12 and 13 show the mapping of the Location vs. Behavior, eg. figure 13 shows HOME, OFFICE, MEETING ROOM, LIBRARY and how the phone will act/behave);

but is silent on the marker module having information of the marked objects.

Kuwahara appears to teach that the BTS just sends location information to the mobile device and the device must determine its current location and if its near a "marked object". The BTS does not appear to send any information about "marked areas" that it is near.

Jonsson teaches "low power registration devices" that transmit signals to a mobile user such that they understand what phone they are near (and a call is routed to said nearby phone). At least Johsson teaches a short-range message/beacon whereby the user can understand what phones they are near.

Furthermore, Naiki teaches a portable phone that can receive a prohibition signal and determine that it should enable/disable operation of transmission functions (Abstract, figures 1-4, C1, L20-50, C7, L60-67). Note that the phone will turn ON when out of range of the short-range transmitter. Also see that he teaches a low-power, short-range transmitter which is shorter range than a BTS – C9, L4-10).

It would have been obvious to one skilled in the art at the time of the invention to modify Naiki, such that the transmitter include marker information about the object, to provide means for the mobile to understand what "structure/location" it is near and control the behavior of the phone accordingly.

As per **claim 2**, the combo teaches claim 1, further comprising: - providing preset stay trigger records in the mobile phone, said stay trigger records comprising a corresponding relationship between a predefined marking information and a predefined stay trigger service; when the mobile phone determines based on the retrieved marking information that the mobile phone stays in the area marked by said marker module and a stay trigger service corresponding to the retrieved marking information is contained in said stay trigger records, performing the corresponding stay trigger service (Kuwahara teaches having various zones and determining how the phone should behave in said zones, eg. which reads on trigger stays)..

As per **claim 3**, the combo teaches claim 1, further comprising: providing preset exit trigger records in the mobile phone, said exit trigger records comprising a corresponding relationship between a predefined marking information and a predefined exit trigger service; when the mobile phone determines based on the retrieved marking information that the mobile phone exits the area marked by said marker module and a exit trigger service corresponding to the retrieved marking information is contained in said exit trigger records, performing the corresponding exit trigger service (Kuwahara teaches defined "zones of behavior" for when the phone is within said zone. Thusly the phone must determine if/when the are ENTERING the zone and LEAVING the zone. Naiki appears to teach that the signal strength is used to determine enterin/leaving AND Jonsson teaches the reception of the registration marker information).

As per **claim 4**, the combo teaches claim 2, wherein said stay trigger service may be repeat trigger service performed repeatedly at preset time intervals, or time trigger service performed at preset time (Kuwahara teaches a more "on-demand" service whereby the mobile will perhaps ask for location information from the BTS while Jonsson and Naiki appear to teach more of a periodic broadcast, eg. at regular intervals or continuously, which reads on the claim). See Naiki who teaches preset time/calendar information (C8, L15-45).

5. (Canceled)

As per **claim 6**, the combo teaches claim 1, wherein said area may be a single-marker area marked by a single marker module, or a multi-marker union area or a multi-marker intersection area by plurality of marker modules (Kuwahara teaches the mobile can receive data from AT LEAST one BTS to determine its location or perhaps triangulation can be used whereby multiple BTS's are involved. Jonsson teaches registration devices (plural) being located throughout an area (Abstract) hence one skilled would envision that overlap could occur and multiple signals would be received. Naiki teaches receiving at least one enable/disable signal which allows for two proximate transmitters to be near each other, eg. one allowing for OUTSIDE operation while the other is located within a building and instructs the phone to disable/vibrate/etc).

As per **claim 11**, the combo teaches claim 1, wherein said services comprises call transfer, incoming call barring, short message service, sleep, awake, alarm clock setting, ring style setting or ring volume setting (the prior art teaches at least Incoming Call Barring, Ring Style setting or Ring Volume – see Kuwahara figure 13 and Naiki's call barring/disablement).

As per **claims 14 and 16**, the combo teaches claim 1, **but is silent on** wherein, after receiving the marking information transmitted from any marker module via its identifier module, if said mobile phone detects that the marker module is a new one, then it executes authentication on the new marker module; if the new marker module passes authentication, the mobile phone further determines whether to trigger corresponding service, otherwise, the marker module is deemed invalid.

The examiner notes that this function is a "security measure" and would be provided by one skilled in order to ensure that the phone's operation is not inhibited by an outside entity who has no right to perform this undesired act.

Art Unit: 2617

The examiner takes **Official Notice** that one skilled would provide security measures whereby the markers are registered and can be verified/authenticated such that the mobile's phone will only behave as commanded IF the marker data is authenticated.

It would have been obvious to one skilled in the art at the time of the invention to modify the combo, such that an authentication process is performed, to provide means for security measures being used to ensure the phone is not controlled by an unwanted person/entity/hacker.

With further regard to claim 16, the authenticated marker's command received by the phone would be executed for either a) as long as the user is within the defined area or b) for a pre-set time (as claimed). The reason being that the user may roam into either a) an area that has no specific time limit (eg. in a library, in a meeting, etc..) or b) an area that does have a typical time limit (eg. on a train until a certain stop, in a hospital until closing, at home until leave for work M-F, passing thru a toll booth, etc.). See Naiki who also teaches time/calendar limits of operation (C8, L15-34).

As per **claim 18**, the combo teaches claim 1, wherein said marker module further comprises an environment-monitoring module for monitoring environmental parameters; said marking information further comprises the environmental parameters detected by the marker module (See Naiki, C1, L35-40, C7, L1-5 and C7, L60-67).

As per **claims 20 and 23**, the combo teaches claim 1, wherein said marker module broadcasts its essential marking information at preset time intervals, after which is received by the mobile phone that then sends back a request, it transmits corresponding detailed marking information based on the received request (The prior art teaches the mobile receiving the data as it is nears a transmitter. The prior art is interpreted as transmitting/broadcasting the data in such a fashion so as to modify the phone's behavior before it enters into a zone whereby its behavior must change. The manner in which the data is sent, eg. one message or several messages is a design choice, eg. it could be one message or a request/provide protocol whereby the mobile

Art Unit: 2617

asks for information and then is provided said information by the transmitter, perhaps after being authenticated/verified by said transmitter, etc).

With further regard to claim 23, the combo teaches understanding of the mobile approaching an area where the phone's behavior will be changed and thus the phone can/will stay in that specified behavior until it leaves. The time when and for how long a message (or messages) will be sent to determine if entering/staying/leaving is a design choice since it can be timed or un-timed (as previously discussed in claim 16).

As per **claim 22**, the combo teaches claim 20, wherein said essential marking information is the communication address of the marker module, which may be static allocated address or a dynamic allocated address (the prior art teaches the transmitter, eg. BTS or registration device or prohibition transmitter, as transmitting "data" regarding the marker and location. Hence the examiner notes that an address can be static or dynamic, eg. similar to TCP/IP addresses which can be static or assigned via DHCP).

The manner in which the location determination is made varies according to the designs of the prior art, eg. it can be a pure location (as per Kuwahara) or a registration device sending information about the location of itself or a prohibition signal that does not have to include the location, just that the phone is commanded ON/OFF). Hence an Address may be provided or not.

As per **claim 26**, the combo teaches claim 25, wherein said wireless identifier module further comprises a transmit module for transmitting a short-distance wireless message to the external marker modules (the prior art of record all teach a mobile use with mobile device. At least Kuwahara teaches a mobile phone interacting with a BTS whereby they can both transmit messages to themselves. The examiner also notes that Jonsson and Naiki both put forth more of a simplex transmission whereby the mobile user/device does not need to interact with the transmitter, hence this is a design choice). NOTE - the claim does not teach what/why the phone is transmitting to the transmitter (eg. it could be a registration message as per cellular operations).

Allowable Subject Matter

Claims 7-10, 12-13, 15, 17, 19, 21, 24 and 27 objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The prior art of record does not teach these highly specific designs:

claim 7: "...wherein, as for any one of the entry trigger records, said mobile phone may work in the single-marker area mode or in the multi-marker union area mode; wherein in the single-marker area mode, as for any marker module matching the trigger record, when the first time the mobile phone receives the marking information transmitted from the marker module, it determines that it enters the single-marker area, and then performs a corresponding entry trigger service; and wherein in the multi-marker union area mode, as for all marker modules matching the trigger record, when the first time the mobile phone receives the marking information transmitted from any one of the marker modules, it determines that it enters the multi-marker union area, and then performs the corresponding entry trigger service"

claim 8: "...wherein, as for any stay trigger record, said mobile phone may work in the single-marker area mode or multi-marker union area mode; when said mobile phone works in the multi-marker union area mode, as for all marker module matching the trigger record, if it receives the marking information transmitted from any marker module during preset time period, the mobile phone then determines that it stays in the multi-marker union area; as for repeat trigger service, if it stays in the multi-marker union area, the mobile phone performs repeatedly the repeat trigger service at preset time intervals; as for time trigger service, if it stays in the multi-marker union area, the mobile phone performs the time trigger service at preset time".

claim 9: "...wherein said marking information comprises Electronics Serial Number (ESN) and Group Number (GroupNo) of the marker module, Object Class (ObjClass), Object Number (ObjNum) and Object Name (ObjName) of the marked

Art Unit: 2617

object, and three-dimensional coordinate offsets from the marker module to the marked object”.

claim 10: “...wherein, said entry trigger record comprises Electronics Serial Number (ESN) matching code and Group Number (GroupNo) of the marker module, Object Class (ObjClass) of the marked object, trigger services and trigger mode (TriggerMode); said exit trigger records comprises Electronics Serial Number (ESN) matching code and Group Number (GroupNo) of the marker module, Object Class (ObjClass) of the marked object, trigger services and trigger mode (TriggerMode); said repeat trigger records comprises Electronics Serial Number (ESN) matching code and Group Number (GroupNo) of the marker module, Object Class (ObjClass) of the marked object, time interval (InterVal) and trigger services; said time trigger records comprises Electronics Serial Number (ESN) matching code and Group Number (GroupNo) of the marker module, Object Class (ObjClass) of the marked object, trigger services and trigger time”.

claim 12: “...wherein said trigger records comprise trigger-permission time limit for triggering certain service; when performing the entry trigger service, exit trigger service or stay trigger service, the mobile phone determines whether the present time is in the trigger-permission time limit, if so, it performs corresponding service, otherwise, it doesn't perform”.

claim 13: “...wherein said trigger records further comprises trigger-prohibition time limit for triggering certain service; when performing the entry trigger service, exit trigger service or stay trigger service, the mobile phone determines whether the present time is in the trigger- forbidden time limit, if so, it doesn't perform corresponding service, otherwise, it performs”.

claim 15: “...wherein said authentication comprises: in accordance with the marking information of a newly detected marker module received by its identifier module, the mobile phone sends its ID information and a random number to the marker module and generates a first encryption number based on said random number and its stored security key; based on received ID information of the mobile phone, the marker module searches for corresponding security key, if successful, it will generates a

Art Unit: 2617

second encryption number based on the security key and the random number and transmits it to said mobile phone; the mobile phone compares the first encryption number with received second encryption number, if the two are consistent, and then determines the marker module passes authentication”.

claim 17: “...wherein said marking information comprises Electronics Serial Number (ESN) and Group Number (GroupNo) of the marker module, Object Count (ObjCount) of the marked objects, list comprising Object Class (ObjClass), Object Number (ObjNum), Object Name (ObjName) of the marked objects, and three-dimensional coordinate offsets”.

claim 19: “...wherein said environment-monitoring module can monitor one or many of the environmental temperature, humidity, pollution index, or noise; said environmental parameters may be one or many of the temperature, humidity, pollution index, or noise”.

claim 21 “...wherein said essential marking information is the Electronics Serial Number (ESN) of the marker module, and said detailed marking information comprises the marking information of the marker module itself and that of the marked objects”.

claim 24: “...wherein, as for every trigger record, said mobile phone may work in the multi-marker intersection area mode; when the mobile phone works in the multi-marker intersection area mode, said trigger records at least comprise a marking information list formed by the marking information of the plurality of marker modules, and said marking information list at least comprises the Electronics Serial Numbers (ESN) of the plurality of marker modules”.

claim 27: “...wherein, as for any one of the exit trigger records, said mobile phone may work in the single-marker area mode or in the multi-marker union area mode; wherein in the single-marker area mode, as for any marker module matching the trigger record, after the mobile phone enters the single-marker area, if it doesn't receive the marking information transmitted from the marker module during a preset time period, the mobile phone determines that it exits the single-marker area, and then performs a corresponding exit trigger service; wherein in the multi-marker union area mode, as for all marker modules matching the trigger record, after the mobile phone

Art Unit: 2617

enters the multi-marker union area if it doesn't receive the marking information transmitted from any one of the marker modules during a preset time period, the mobile phone determines that it exits the multi-marker area, and then performs the corresponding exit trigger service”.

Conclusion

Pertinent but not cited art is found in the PTO-892 as well.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Stephen M. D'Agosta whose telephone number is 571-272-7862. The examiner can normally be reached on M-F, 8am to 5pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Dwayne Bost can be reached on 571-272-7023. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Stephen M. D'Agosta/
Primary Examiner, Art Unit 2617